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STATISTICAL BULLETIN
Metropolitan Life Insurance Co.

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RECORD HEALTH RATE—FIRST HALF OF 1932

Never before, during the winter and spring seasons of any year, has the general health of the industrial populations of the United States and Canada measured up to the record of 1932. The cumulative deathrate for the first six months stands at 9.2 per thousand; the lowest previous figure was 9.4—registered for the first half of 1930; in 1931, the deathrate was 9.5. The actual number of deaths of Metropolitan Industrial policyholders in the January to June period, in 1932, was 78,774. If the lowest previous deathrate had again prevailed, there would have occurred 1,409 more deaths than were actually recorded; and if the deathrate for the first half of 1931 had prevailed, 2,950 more deaths would have been recorded. In spite of unfavorable business conditions and wide unemployment, there have been fewer deaths than under the very best health conditions previously known. Reports from all sections of the United States show improvement, and the same is true of Canada.

The colored policyholders, with a drop of 10.7 per cent. in their deathrate, have benefited even more than have the white. The mortality rates among insured negroes have been lower this year for several important diseases for which increases are shown for the white policyholders. Cerebral hemorrhage, organic heart disease, and chronic nephritis are conspicuous examples.

Prospective New Minimal Deathrates for 1932

The deathrates for diphtheria, tuberculosis, pneumonia, diarrheal diseases and puerperal conditions are at the lowest points ever recorded up to the end of June. The season of the year when the highest mortality is expected from the first three of these diseases has passed; and, barring unlooked for incidence of diphtheria or the general prevalence of influenza in virulent form, we are assured of the lowest deathrates of all time for diphtheria and pneumonia.

Tuberculosis

No doubt whatever remains as to tuberculosis. The cumulative mortality rate for the half-year (75.3 per 100,000) marks a drop in a single year of 8.1 per cent.—and last year's figure was the previous minimum. Experience has shown us that the tuberculosis deathrate at the end of the year, runs at least five points lower than the cumulative rate for the first six months. On this basis, we look forward confidently to a tuberculosis mortality rate of approximately 70 per 100,000 for 1932. If that figure is actually recorded, the mortality from this disease will have been cut almost in half since 1920, when it was 137.9 per 100,000.

The improvement for tuberculosis has been particularly noticeable during 1932 among the colored policyholders, with a drop of 14.7 per cent. as compared with a decline of 4.8 per cent. for the whites.

Communicable Diseases of Childhood

Each of the four principal communicable diseases of childhood has registered a lower deathrate than in 1931, among the white policyholders; among the colored, the mortality from whooping cough has increased slightly.

No Influenza Outbreak and Reduced Mortality from Pneumonia

The greatest single factor in bringing the deathrate for the half-year to a new minimum has been an 18.8 per cent. drop in the mortality from pneumonia, as compared with the like part of 1931. This drop, in turn, has been associated with a lower deathrate from influenza. In our issue of November, 1930, we pointed out that influenza epidemics seemed to have a tendency to recur in waves with a periodicity of three years. Judging by the deathrates alone, the year 1932, to date, has not conformed to this periodicity; for we were due for a crest in the wave this year. Actually, as has been pointed out, the 1932 influenza deathrate has been lower than in the preceding year. But, only half of the year has elapsed, and there is still a possibility that the deathrate in the autumn or early winter may bring up materially the average for the year, although there was widespread prevalence of influenza during the first quarter of 1932. Fortunately, the disease was of a relatively mild type, with a low case-fatality rate.

The "Degenerative" Diseases

There have been slight rises in the deathrates for heart disease, cerebral hemorrhage and chronic nephritis, due almost entirely to

Deathrates* per 100,000 Persons Exposed. First Six Months of 1930, 1931 and 1932 Compared. By Color for Principal Causes of Death. Metropolitan Life Insurance Company, Weekly Premium-Paying Industrial Business.

Cause of Death	Deathrates per 100,000 Persons Exposed*					
	White			Colored		
	Jan.-June 1932	Jan.-June 1931	Jan.-June 1930	Jan.-June 1932	Jan.-June 1931	Jan.-June 1930
All Causes of Death	845.6	861.3	843.1	1497.5	1677.6	1618.1
Typhoid fever	1.1	1.1	1.1	2.3	2.6	2.7
Measles	3.0	5.2	5.0	1.3	2.8	2.8
Scarlet fever	4.2	4.3	3.7	1.5	1.8	1.1
Whooping cough	3.6	3.7	4.6	4.3	3.8	4.8
Diphtheria	4.8	5.0	7.7	2.3	2.4	3.5
Influenza	22.6	28.1	17.1	52.6	81.3	53.1
Meningococcus meningitis	1.4	2.5	3.7	1.9	9.1	12.5
Tuberculosis (all forms)	59.3	62.3	67.5	199.6	234.1	227.1
Tuberculosis of resp'y system	52.1	55.0	58.3	177.3	207.7	198.2
Tuberculosis of the meninges, etc.	3.0	3.1	4.1	5.0	5.9	7.0
Other forms of tuberculosis	4.2	4.2	5.1	17.3	20.6	21.9
Cancer	90.3	82.6	76.9	98.2	88.8	77.8
Diabetes	24.0	22.2	19.4	27.1	26.5	22.6
Alcoholism	2.7	3.0	2.9	3.7	3.8	5.2
Cerebral hemorrhage: apoplexy	58.8	56.5	54.2	130.4	135.8	128.6
Organic diseases of the heart	155.6	148.8	142.7	253.3	273.9	274.1
Total respiratory diseases	87.5	105.5	104.5	160.4	207.1	196.8
Bronchitis	2.8	3.6	3.9	4.5	4.8	5.2
Bronchopneumonia	30.9	39.6	38.4	40.1	56.0	55.2
Pneumonia (lobar and undefined)	46.6	54.4	53.9	104.2	133.1	124.7
Other diseases of resp'y system	7.2	8.0	8.2	11.6	13.1	11.7
Diarrhea and enteritis	8.5	10.0	12.5	7.4	12.1	13.7
Under 2 years	6.5	7.8	9.7	3.0	5.0	7.4
2 years and over	2.0	2.1	2.7	4.4	7.1	6.2
Acute nephritis	3.2	3.8	3.4	9.9	13.1	15.3
Chronic nephritis	64.1	62.7	62.7	138.1	143.3	140.7
Total puerperal state	10.3	11.1	12.3	16.2	18.3	19.2
Total external causes	66.4	67.6	69.3	92.8	102.6	109.1
Suicides	11.6	10.4	10.1	7.9	6.1	7.2
Homicides	3.2	3.7	3.2	30.3	29.8	28.8
Accidental and unspecified violence	51.6	53.6	56.0	54.6	66.7	73.1
Automobile Accidents	17.9	18.9	18.4	18.4	22.2	18.2
All other and ill-defined causes of death	174.1	175.4	171.8	294.2	314.4	307.5

*All figures in this table include insured infants under one year of age. The rates for 1932 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

increases in the number of deaths from these conditions during the month of June. The increase, however, has affected the white policyholders only; and may have been due to a slight shifting in the age distribution of the insured, whereby the per cent. of policyholders in the higher age groups has increased a little.

Cancer

The cancer deathrate has increased materially this year, following a rise during 1931. The higher mortality from cancer has affected both white and negro policyholders—with the latter showing the greater increase. The cancer situation is discussed below.

Diabetes Deathrate Still Rising

The diabetes deathrate has increased continuously since 1924. It rose sharply in 1931, and this rise has been followed, during the first half of 1932, by a further increase of 7.5 per cent. as compared with the figure for the corresponding part of 1931. A discussion of some of the major aspects of the mortality from diabetes will appear in the August BULLETIN.

Deaths from Violence Decline

There have been fewer violent deaths than in the like part of 1931, although the suicide mortality rate has increased from 9.9 to 11.2 per 100,000. Homicides, however, have been a little less frequent than in 1931; and the deathrate for all types of accidents, considered as a group, has dropped nearly 6 per cent. Automobile fatalities, for the first time since the Metropolitan has kept statistical records of them, show a noteworthy drop this year. Up to the end of June, the actual number of such deaths among Metropolitan Industrial policyholders was 1,541, as compared with 1,724 during the like period of last year. The automobile accident deathrate declined from 19.3 per 100,000 in 1931, to 18.0; this is equivalent to 6.7 per cent.

The table on page 3 presents the deathrates among white and colored policyholders respectively for the first six months of 1932, 1931 and 1930.

UNPRECEDENTED RISE IN THE CANCER DEATHRATE

While health conditions in general have been extremely favorable during the last two years, the deathrate from cancer has been rising sharply. This is one of the very few unfavorable developments in the public health in recent years.

It is true that, for a long period of years, the cancer deathrate, both among the many millions of Metropolitan policyholders and the general population of the country, has been increasing. But the rise has been slow in each group. During the twelve-year period, 1919 to 1930, the difference between the minimum crude deathrate for the insured (67.0 per 100,000—registered in 1919) and the maximum (79.5—registered in 1930), was 18.7 per cent. In strong contrast with this relatively slow average rise of almost 1.5 per cent. per annum in the deathrate, we were confronted, at the end of 1931, with a 7.4 per cent. rise in a single year; and reports for the first half of 1932 show a further rise of 9.5 per cent. over the rate for the like part of last year. If deaths from cancer continue to occur at the present rate throughout 1932, the cancer deathrate among Metropolitan Industrial policyholders will have increased more than three-fourths as much, *in two years*, as it did in all the preceding twelve years back to 1919.

It cannot be determined, at this writing, whether the cancer mortality rate rose as sharply in 1931, among the population at large, as it did among insured wage-earners and their dependents. Unfortunately, only fragmentary and inconclusive mortality data for 1931 are, as yet, available from official sources. Nevertheless, the few reports that have been received strongly suggest that cancer deaths increased last year in the country at large, to an extent that has not been heretofore observed in any single year—although the rise was not as marked as among the working classes. According to provisional mortality reports from the States of New York and New Jersey, the cancer mortality rate in 1931 increased 5.8 per cent. and 6.4 per cent. respectively in these two states, which comprise approximately one-seventh of the population of the country. Scattered reports from cities show per cent. increases of 11.7, 9.1, 5.8, 4.3 and 2.9 in San Diego, Syracuse, Philadelphia, Birmingham and Rochester, respectively. On the other hand, only average rises are shown in the States of Indiana and Wisconsin and the cities of New York and New Haven; and small declines were registered in Rhode Island and in Buffalo, Detroit and Milwaukee.

The weight of the evidence is that the cancer death toll is now increasing at a very rapid rate. It has been suggested that the unusual increase, among Metropolitan Industrial policyholders, may have been due, in part, to a change during 1931 and 1932 in the relative age distribution of lives exposed to risk, whereby a considerably larger proportion of the policyholders is now in those age ranges where cancer mortality is the highest. This thesis is not tenable, however.

The facts of age distribution among our policyholders show no marked shift. Again, when the 1930 and 1931 cancer deathrates are standardized for age, a large increase in the rate is found. Furthermore, no such marked increase in the deathrate has been observed in the mortality from cardiac disease, chronic nephritis and cerebral hemorrhage, all of which, like cancer, are diseases of the older ages. The heart disease deathrate among the insured rose only 2.1 per cent. in 1931 (as compared with 7.4 per cent. for cancer), while that for cerebral hemorrhage was unchanged and that for chronic nephritis dropped to 1.6 per cent.

We can only conclude that some forces have been at work since the beginning of 1931 to cause a marked acceleration in the number of deaths reported from cancer. It is by no means assured, as yet, that the *actual* increase in 1931 and 1932 has been as sharp as our figures indicate. There is always the possibility that part of the rise resulted from more accurate diagnoses. An eminent authority on cancer believes this to be true. Many more cases are undoubtedly being discovered through laboratory findings, operative procedures and autopsies, which are being made more often now than ever before. But there is, of course, the possibility that over and above these factors, we are confronted with some influence that is increasing the true incidence of cancer. Time will be required to answer this question.

ACCIDENTAL DROWNINGS DECREASE SLIGHTLY

Each year, accidental drowning claims the lives of more than 7,500 persons in the United States. Next to automobile accidents, and falls, drownings cause more deaths than any other type of accident. They are especially concentrated among males, and in the age periods between five and 25 years. Among such male persons they rank as one of the leading causes of death, whether by disease or violence, being exceeded only by tuberculosis, heart disease, pneumonia, appendicitis and automobile fatalities. Every effort would seem to be justified, therefore, to mitigate this wholesale destruction of life, so largely preventable. But the first step must be to obtain more detailed information as to where and how drownings occur.

The Metropolitan Life Insurance Company has compiled statistics covering a long period of years for the many millions of its policyholders. In the year 1931, the drowning deathrate* in this group of people was 6.9 per hundred thousand. This is 34 per cent. less

*Standardized deathrate, ages one to 74.

than in 1911, when the figure was 10.5 per hundred thousand. The drop has affected both white and colored persons, both sexes and substantially every age range. This is the favorable side of the picture. But it is equally true that, within the last ten years, there has been little improvement. In 1922, for example, the standardized deathrate was 7.5 per hundred thousand. This identical figure was recorded again six years later; and, by 1931, the rate had been reduced only to 6.9. In the general population of the United States, the crude rate in 1922 was 6.4 per hundred thousand—a figure that was exceeded in several subsequent years. By 1930, it had been reduced only to 5.6.

What we need most, in connection with a program to control drownings, are the facts in greater detail than has yet been gathered by any agency to show the conditions under which drownings occur. We must know how many arise out of carelessness or bravado while boating or canoeing; how many occur at beaches, swimming pools and other resorts, and how many (or how few) actually occur at places where water sports are adequately supervised and where rescue work and the art of resuscitation are thoroughly understood. When such statistics become available, they will show, in our judgment, that very few drownings occur at the hundreds of summer camps for both boys and girls, where competent instructors and guards are always at hand, where "stunts" are prohibited and where every camper's swimming activities are restricted to limitations that have been predetermined by actual tests of the camper's swimming skill. If, for example, the water safety practices of the Life Saving Division of the AMERICAN RED CROSS could be applied at every place where there is large-scale swimming, the drowning deathrate would soon become a negligible item in American mortality statistics.

An interesting fact brought out by the Metropolitan's statistics is the marked difference in the mortality between the two sexes. Drowning is predominantly a misfortune among males. Their deathrate at all ages is eight times as high as that among females, among white persons; and twelve times as high among colored males as among females. The highest rates are reached in the second decade of life, although the two five-year age periods, 5 to 9 and 20 to 24, are very serious also for this type of fatal accident.

Drowning has a distinct seasonal incidence. It is a hazard of late spring, summer and early fall, with more than 60 per cent. of the deaths occurring from May to August, inclusive.

As we have noted, the last ten years, by contrast with the decade 1911 to 1920, show a marked reduction in the deathrate. But even in this comparison there are the disappointing facts, first, that there appears to be a cessation of improvement in recent years, and second, the least improvement has been effected in those age periods where the incidence is heaviest, that is, in adolescence and early adult life.

The table below gives the facts for accidental drowning among Metropolitan Industrial policyholders for the ten-year periods 1911 to 1920 and 1922 to 1931 by color, sex and age.

This large source of preventable deaths must be reduced. In the last analysis, each community must become aware of the seriousness of the situation and must institute local supervision and other preventive measures. Here is a large field for valuable life saving.

Deathrates per 100,000 from Accidental Drowning. Metropolitan Life Insurance Company—Industrial Department. Weekly Premium Paying Business. 1911 to 1931

Age Period	Deathrates per 100,000								Per Cent. Change 1922 to 1931 Since 1911 to 1920			
	White				Colored							
	Males		Females		Males		Females		White		Colored	
	1922 to 1931	1911 to 1920	1922 to 1931	1911 to 1920	1922 to 1931	1911 to 1920	1922 to 1931	1911 to 1920	Males	Females	Males	Females
Ages 1 to 74 years*	12.9	18.2	1.5	2.2	16.2	20.9	1.3	1.8	—29.1	—31.8	—22.5	—27.8
1 to 4	6.8	8.6	2.4	3.3	3.4	4.3	1.4	1.8	—20.9	—27.3	—20.9	—22.2
5 to 9	13.2	18.2	1.9	2.1	14.4	11.1	1.0	1.8	—27.5	— 9.5	+29.7	—44.4
10 to 14	15.6	22.6	2.5	2.7	34.4	39.1	1.3	2.9	—31.0	— 7.4	—12.0	—55.2
15 to 19	21.6	26.6	3.0	4.0	39.4	47.8	3.5	2.7	—18.8	—25.0	—17.6	+29.6
20 to 24	16.5	22.1	1.5	3.3	22.2	26.9	.9	2.2	—25.3	—54.5	—17.5	—59.1
25 to 34	10.4	15.9	.8	1.5	11.1	21.5	1.2	1.1	—34.6	—46.7	—48.4	+ 9.1
35 to 44	10.0	15.5	.7	1.0	7.2	13.2	1.0	1.6	—35.5	—30.0	—45.5	—37.5
45 to 54	11.1	17.6	.6	1.6	9.1	13.2	.6	1.7	—36.9	—62.5	—31.1	—64.7
55 to 64	12.4	16.9	.7	1.2	6.9	9.2	1.2	1.3	—26.6	—41.7	—25.0	— 7.7
65 to 74	10.8	18.3	.8	1.3	6.0	11.7	†	1.4	—41.0	—38.5	—48.7	—100.0

*Standardized deathrates at ages one to 74.
†No deaths.

HEALTH RECORD FOR JUNE, 1932

The health record for June, among Metropolitan Industrial policyholders, was less favorable than for the corresponding month of last year and two years ago. The deathrate was 8.8 per thousand, as compared with 8.5 for May, 1932, and 8.4 for June, 1931. It must not be inferred, however, that deaths occurred in June at an above-

average rate over a period of years. The fact is that the June, 1932, rate was merely the highest among those for a short series of remarkably low June figures, beginning with 1929. Prior to 1929 the mortality rate of Metropolitan Industrial policyholders was higher every June than in 1932.

The deathrate in the general population of all the large cities of the United States during June (10.4 per 1,000), was, on the other hand, lower than that for May (11.5), or for June, 1931 (11.0). It is possible that the increases shown in the insurance mortality record for June reflect merely a temporary and artificial condition. At any rate, the reports for the first half of July indicate that, like three of the six preceding months of this year, the mortality in 1932 is running below that for the like part of 1931. More sickness from typhoid fever and poliomyelitis was reported during June than in May; there were fewer cases of diphtheria, influenza, measles, scarlet fever and smallpox. Comparison with June, 1931, shows that there was more sickness this year than last from influenza, scarlet fever and typhoid fever, together with less from diphtheria, measles, poliomyelitis and smallpox.

Among the recent outstanding public health activities were the following. In order to make the material developed through the HEALTH ORGANIZATION OF THE LEAGUE OF NATIONS more widely known, a quarterly bulletin is being published for general circulation. The first issue presents the results of the CONFERENCE ON IMMUNIZATION AGAINST DIPHTHERIA, held in London in June, 1931; also a discussion of medical education in England by SIR GEORGE NEWMAN; and reports on the milk supply of North American cities, on tropical pneumonia, antirabies treatments and other subjects. During the recent annual session of the AMERICAN MEDICAL ASSOCIATION in New Orleans, the United States Quarantine Station at Algiers was formally opened. Under the direction of a Committee of the MICHIGAN STATE MEDICAL SOCIETY, a survey of medical service and health agencies will be carried on in that state. It is hoped that, from the facts presented, the profession may be guided in the adoption of a definite policy concerning the social and economic aspects of medical care. In the collection of data, schedules will be sent to physicians, hospitals and laboratories. This study of medical facilities is being made in accordance with action taken at the 1931 annual meeting of the Michigan State Medical Society. Cooperating with the Kentucky State Board of Health, the UNIVERSITY OF KENTUCKY, during its summer session, is offering a number of special courses in public health. Courses in epidemiology and communicable diseases, and public health admin-

istration, are given for health officers only, under the direction of DR. ALLEN W. FREEMAN, Professor of Public Health Administration, JOHNS HOPKINS UNIVERSITY SCHOOL OF HYGIENE AND PUBLIC HEALTH.

In the May, 1932, STATISTICAL BULLETIN, the birthrate, deathrate, and infant mortality rate of Boston were referred to. THE BOSTON HEALTH DEPARTMENT has called our attention to the fact that these figures were based on incomplete returns. The final rates, which, the BOSTON HEALTH DEPARTMENT states, will appear in the annual report of that Department for the year 1931, are: birthrate, 21.79 per 1,000; infant mortality rate, 60.71; deathrate, 14.04. On this basis, the corresponding changes from the 1930 figures are: for the birthrate, a decline of 5.7 per cent.; for the deathrate, a decline of .43 per cent.; for the infant mortality rate, a decline of 12 per cent.

The following table shows the mortality among Industrial policyholders for June, 1932; May, 1932, and June, 1931, together with the cumulative rates for the first six months of each year.

METROPOLITAN LIFE INSURANCE COMPANY

Deathrates* per 100,000 for Principal Causes Premium-Paying Business in Industrial Department (Annual Basis)

MONTHS OF JUNE, 1932; MAY, 1932, AND JUNE, 1931

CAUSES OF DEATH	ANNUAL RATE PER 100,000 LIVES EXPOSED*				
	June, 1932	May, 1932	June, 1931	Cumulative January to June	
				1932	1931
TOTAL—ALL CAUSES	884.2	848.0	836.9	919.9	954.4
Typhoid fever	1.9	1.0	1.9	1.2	1.2
Measles	2.2	3.2	5.5	2.8	4.9
Scarlet fever	2.9	4.3	3.7	3.9	4.0
Whooping cough	3.2	3.0	3.3	3.7	3.7
Diphtheria	2.4	3.0	3.3	4.5	4.7
Influenza	9.8	18.7	8.9	26.0	34.2
Tuberculosis (All forms)	79.1	71.4	78.0	75.3	81.9
Tuberculosis of resp'y system	68.6	63.4	68.1	66.4	72.4
Cancer	96.3	86.5	81.4	91.2	83.3
Diabetes mellitus	23.4	22.6	19.5	24.4	22.7
Cerebral hemorrhage	65.6	62.3	59.2	67.0	65.6
Organic diseases of heart	160.2	157.4	139.6	166.7	163.0
Pneumonia (All forms)	55.0	69.6	53.3	85.1	104.8
Other respiratory diseases	9.7	9.3	8.9	10.7	12.3
Diarrhea and enteritis	9.6	7.4	10.8	8.3	10.2
Bright's disease (Chronic nephritis)	69.6	65.5	66.0	72.6	71.9
Puerperal state	9.9	9.8	11.4	11.0	12.0
Suicides	12.9	11.4	10.8	11.2	9.9
Homicides	6.6	5.3	6.2	6.3	6.7
Other external causes (excluding suicides and homicides)	63.0	47.7	65.4	51.9	55.1
Traumatism by automobiles	20.2	16.2	23.0	18.0	19.3
All other causes	200.9	188.6	199.7	196.1	202.4

*All figures in this table include insured infants under one year of age. The rates for 1932 are subject to slight correction, since they are based on provisional estimates of lives exposed to risk.

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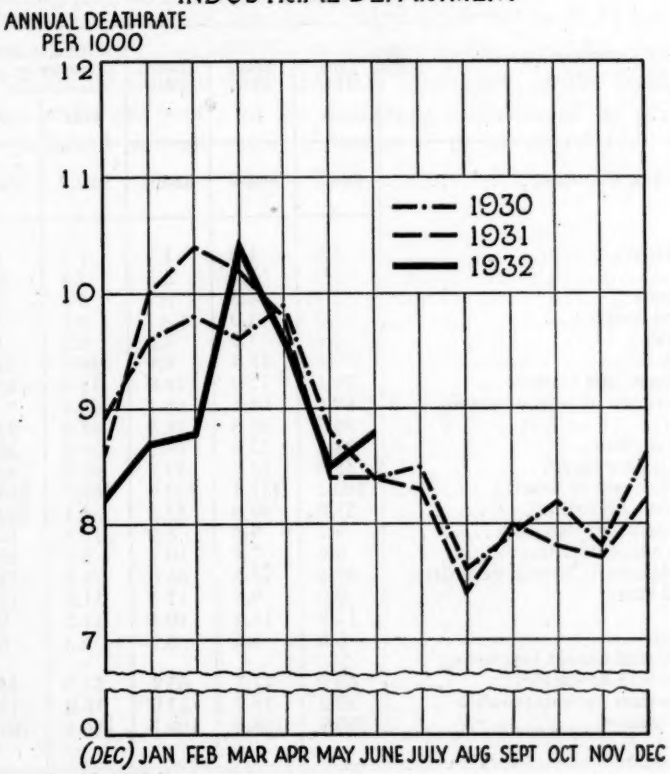
DEATHRATES
FROM ALL CAUSES

METROPOLITAN LIFE INSURANCE CO.
INDUSTRIAL DEPARTMENT



1930	9.6	9.8	9.6	9.9	8.8	8.4	8.5	7.6	7.9	8.2	7.8	8.6
1931	10.0	10.4	10.2	9.8	8.4	8.4	8.3	7.4	8.0	7.8	7.7	8.2
1932*	8.7	8.8	10.4	9.6	8.5	8.8						

* Rates for 1932 are provisional

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